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TITLE: Fluorescent phenylboronic acids for detection of saccharides

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PATENT ASSIGNEE(S): Research Development Corporation of Japan, Japan

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CODEN: BAXXDU

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PATENT INFORMATION:

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GB 2284809	A	19950621	GB 1994-22327	19941104
GB 2284809	B	19980429		
JP 08053467	A	19960227	JP 1994-293879	19941101
JP 2883824	B2	19990419		
US 5503770	A	19960402	US 1994-336236	19941107
DE 4439783	A1	19980507	DE 1994-4439783	19941107
DE 4439783	C2	20020808		
PRIORITY APPLN. INFO.:			JP 1993-302385	A 19931107
			JP 1994-147061	A 19940606

OTHER SOURCE(S): MARPAT 123:280304

GI For diagram(s), see printed CA Issue.

AB Fluorophore I (R1 = aryl, preferably anthryl; R2 = alkyl, aryl; m, n = 0-2), in which an amino N atom can interact intramolecularly with the boronic acid, emits high-intensity fluorescence upon binding to saccharide(s), and is therefore suitable for use in the detection of saccharide(s). Thus, o-tolylmagnesium bromide reacted with tri-Me borate to form o-tolylboronic anhydride, which was brominated on the Me group with N-bromosuccinimide and refluxed with 9-(methylamino)methylantracene to form I (R1 = 9-anthryl, R2 = Me) (II). An aqueous solution of II fluoresced intensely in the presence of glucose or fructose.

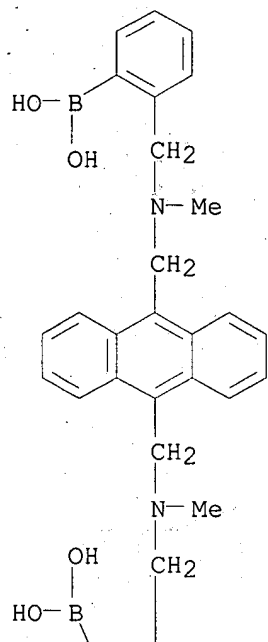
IT 162254-07-1

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent phenylboronic acids for detection of saccharides)

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CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

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